haacon

OPERATING INSTRUCTIONS
(Translation)

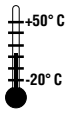
GB

TANGO rope winch
Type WV 300/500 KV 300/500
WE 300/500 KE 300/500

1. USER GROUPS

	Duties	Qualifications
Operator	Operation, visual inspection	Instruction by means of the operating instructions; Authorised person 1
Specialist personnel	Assembly, disassembly, repair, maintenance	Mechanic
	Tests	Authorised person 2 per TRBS-1203 (Technical expert)

2. SAFETY INSTRUCTIONS



Appropriate use
Operate the equipment in accordance with the information in these operating instructions.
- Only use to lift, lower and pull freely-movable loads.
- Only use when in perfect working order.
- Only allow to be operated by personnel instructed on how to do so.

Safety-conscious work
- First read the operating instructions.
- Always be conscious of safety and hazards when working.
- Observe lifting device and load during all movements.
- Immediately report any damage or defects to the person in charge. Repair equipment first before continuing work!
- Do not leave the load suspended without supervision.
- Transport device protected against impacts and shocks, falling over or toppling.

The following are not allowed:
- Overload (--> technical data, type plate, payload plate)
- Mechanical propulsion.
- Impacts, blows.
- Long lowering operations.

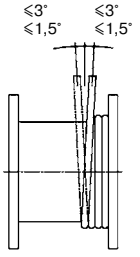
Use exclusions
- Not suitable for permanent operation and vibration stress.
- Not approved for use as builders' hoist (BGV D7).
- Not approved for use on stages or in studios (BGV C1).
- Not approved for use as a retractable transportation device for personnel (BGR 159).
- Not approved for use in explosive areas/environments.
- Not suitable for aggressive environments.
- Not suitable for lifting hazardous loads.

Organisational measures
- Ensure that these operating instructions are always at hand.
- Ensure that only trained personnel work with the equipment.
- Check at regular intervals whether it is being used in a safety and hazard conscious manner.

Installation, service and repair
Only by specialist personnel!
Only use original spare parts for repairs.
Do not modify or alter safety-relevant parts!
Additional attachments must not impact safety.

Further regulations to be observed are
- German Industrial Health and Safety Ordinance (BetrSichV).
- Country-specific regulations.
- German Accident prevention regulations (BGV D8).

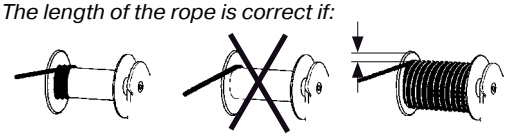
Load
- Do not leave suspended without supervision.
- Do not allow to swing.
- Do allow to fall in the rope.



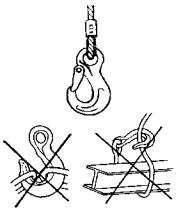
Rope
- Compliant with EN 12385-1 and EN 12385-4 and the technical data
- Maintain rope deviation angle
  non-rotating rope ≤ 3° (standard)
  rotation-resistant rope ≤ 1.5°
- Use a rotation-resistant rope for unguided loads. This can reduce the resting period of the rope (drive mechanism group).
- Wind up the wire rope under pretension, e.g. fully wind up the rope and adjust the rope length to the lift.

Prohibited:
Touching the drum and rope intake during operation!

The length of the rope is correct if:



Lifting equipment
- Ensure sufficient load-bearing capacity.
- Only use load hooks with a safety flap.
- Use the approved load hooks with rope thimbles and rope clip.
- Attach the load properly.
- Do not use the winch rope to secure the load.



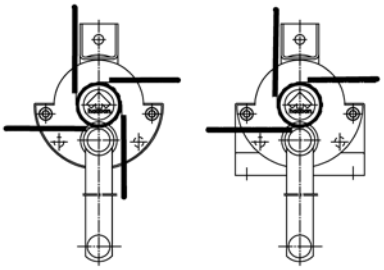
3. TECHNICAL DATA

Model: TANGO			300	500
Order no., wall winch, galvanised			205986	205987
Order no., bracket winch, galvanised			207099	207118
Order no., wall winch, rust-free stainless steel			207117	207120
Order no., bracket winch, rust-free stainless steel			207117	207120
Nominal load		kg	300	500
Minimum load		kg	30	50
First layer	Rope pulling force	kg	300	500
	Rope take-up	m	4,0	3,2
Max. number of layers			6	5
Final layer	Rope pulling force	kg	185	320
	Rope take-up	m	29	22
Rope diameter		mm	4	5
Drive mechanism group1)			1Dm	1Dm
Minimum breaking force		kN	8,9	14,8
Crank force		N	160	200
Lift / crank rotation	1. layer	mm	65	46
	Final layer	mm	98	67
Weight without rope		kg	5,0	5,0
1) Drive mechanism group acc. to DIN 15020 and FEM 9.511				

4. CONFIGURATION
Drum winch with direct drive or via a single-stage gearbox. The load is held fast in each position by a load pressure brake.

5. INSTALLATION
- Attachment structures should be designed for the max. force
- Ensure that the mounting surfaces are flat
- Secure wall winches with three M12 screws (strength class at least 8.8), and bracket winches with four screws, each with a washer
- Tighten and secure the screws evenly
- Provide adequate space for the crank.

6. ROPE DIRECTION
If rope is inserted in the wrong direction, the brake is ineffective!



WE/ WV KE/ KV

Choice of wire rope and fastening

Before fitting the rope, lightly grease the rope drum.

- Recommended ropes:
  Galvanised, (not twist-free)
  EN 12385, Tab. 12, 6x19 WC 1770 B sZ (former DIN 3060 SE znk 1770 sZ)
  Ordinary ropes, stainless steel:
  similar to EN 12385. 7 x 19
  [previously DIN 3060 SE bk 1570 sZ (1.4401)]
  For rope diameter and minimum breaking force, see point 3
  Ropes with plastic sheathing are not permitted.

Hard-solder the most convenient end of the rope and lock it to the rope drum with an Allen key (WAF 4 to 6 Nm; WAF 5 to 9 Nm) (fig. 1). When turning the crank clockwise, the rope must wind on to the drum as shown in fig. 2.

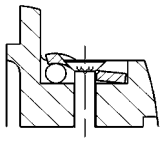


fig. 1

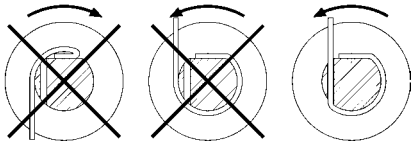


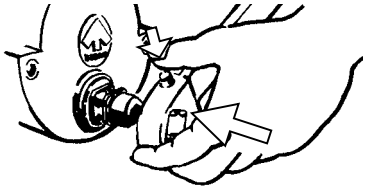
fig. 2

Check for function each time before starting work.

7. OPERATION

To lift the load: turn the hand crank clockwise.
To lower the load: turn the crank anticlockwise.
If the crank is released during lifting or lowering, the load (⩽ minimum load!) is held in its current position.
Do not wind up the rope under load beyond the point where the rims project at least 1.5 times the rope diameter above the coiled rope. This avoids overloading the winch and prevents the rope from coming off the drum at the side.
At least 3 winds of the rope must remain on the drum at all times.
The rope pulling force of the first layer is the same as the nominal pulling force of the winch. The pulling force decreases for each additional layer of rope (--> type plate, pulling force for first/last layer of rope).

Variant with removable crank (optional)



8. TESTING

The equipment must be inspected in accordance with the conditions of use and the operating conditions at least once per year by an authorised person 2 per TRBS 1203 (Technical expert) (testing per BetrSichV, §10, sect.2 represents implementation of EC Directives 89/391/EEC and 95/63/EC and the annual occupational safety inspection per BGV D8, §23, sect. 2 and BGG956). These inspections must be documented:
– Before commissioning.
– After significant alterations before recommissioning.
– At least once per year.
– In the event of unusual occurrences arising that could have detrimental effects on the safety of the winch (extraordinary tests, e.g. after a long period of inactivity, accidents, natural events).
– After repair works that could have an influence on the safety of the winch.
Technical experts (AP2) are persons, who have sufficient knowledge based on their specialist training and experience, in the areas of winches, lift and pull systems, and familiarity with the relevant official occupational health and safety rules, accident prevention regulations, guidelines and generally accepted engineering rules (e.g. EN standards), to evaluate the operational safety of winches, and lift and pull systems. Technical experts (AP2) are to be nominated by the operator of the equipment. Performance of the annual occupational safety inspection as well as the training required to obtain the aforementioned knowledge and skills can be provided by haacon hebetechnik.

9. MAINTENANCE RECOMMENDATION

The operator determines the intervals themselves based on frequency of use and the operating conditions.
– Regular cleaning, no steam jets!
– Carry out visual check on inaccessible brakes / locks every 5 years at the latest, replace brake pads as required.
– General overhaul by the manufacturer after 10 years at the latest.

CAUTION!
Only perform inspection, maintenance and repair work on an unloaded hoist. Only allow work on brakes and locks to be performed by qualified specialist personnel.

Maintenance and inspection work	Intervals
Visual check of the rope hooks (load carrier)	Before every use
Function of the winch	
Condition of the rope and lifting equipment	
Brake function under load	
Check rope for wear acc. to DIN ISO 4309 and service	Quarterly Annually
Check fastening bolts for secure seating	
Check all parts of the winch and crank for wear, if applicable, replace defective parts.	Annually
Check type plate for legibility	
Have an inspection performed by an expert	

Lubricant recommendations: Multi-purpose grease per DIN 51502 K3K-20

10. OPERATING FAULTS AND THEIR CAUSES

Fault	Cause	Remedy
It is difficult to crank the winch in an unloaded state	No lubricant in the bearing points Drum bearing dirty	Perform maintenance work.
	Winch was braced during installation	Check fastening
Load is not held	Rope incorrectly wound, direction of rotation wrong for lifting, brake worn or defective	Apply the rope correctly. Check the brake components and replace worn components
	Inadequate load	Load > 30 / 50 kg
Brake does open, load can only be lowered by exercising force	Brake discs or braking mechanism under tension!	Release the brake by gently striking the crank arm with the palm of your hand in the direction of lowering

11. SPARE PARTS

When ordering spare parts it is essential to quote:
– The type and serial number of the equipment / item and part number

12. DISASSEMBLY, DISPOSAL

– Make sure to observe the safety instructions.
– Dispose of the equipment and the substances within it in an environmentally responsible manner.

EU Installation Declaration

haacon hebetechnik gmbh
Josef-Haamann-Strasse 6
D-97896 Freudenberg/Main

haacon group

Manufacturer: haacon hebetechnik gmbh
Josef-Haamann-Strasse 6
D-97896 Freudenberg/Main

Phone +49 (0) 9375 / 84-0
Fax +49 (0) 9375 / 8466

The product

Product name: Hand rope winches

Type:

220	241	421	462	468	4060	4185	4202
4210	4216	4235	4284	4321	4471	4472	4483
4491	4585	4751	4821	4843	4862	209480	KWV
KWE	Tango	WA					

Load capacity range: 0,05 – 3 t

conforms with the basic requirements of the directive **Machines (2006/42/EG)**
Appendix I, article

1.1.2	Basic for the integration of safety
1.1.3	Materials and products
1.1.5	Construction of the machine regarding its handling
1.3.2	Risk of breakage during operation
1.3.4	Risks by surface, edges and corners
1.3.7	Risks caused by moving parts
1.3.9	Risk of uncontrolled movements
1.7	Information
4.1.2	Protective meaures against mechanical hazards
4.3.3	Machines to lift loads
4.4	Operating instructions

The product is an incomplete machine as per machine directive (2006/42/EG). The product must not be taken into operation until it is determined that the machine, in which it is to be installed conforms with the machine directive (2006/42/EG).

If the product is changed significantly, it will lose this conformity declared by the manufacturer.

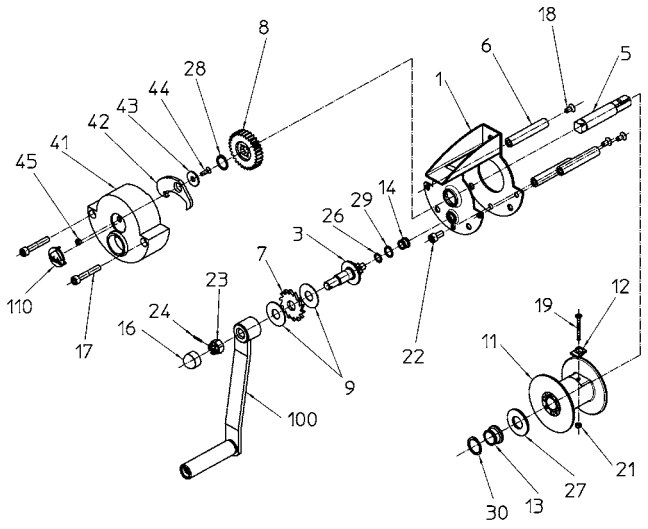
The manufacturer agrees to submit the specific documentation pertaining to this product to individual state institutions electronically, if so requested.
The specific technical documentation as outlined in Appendix VII Part B were compiled.

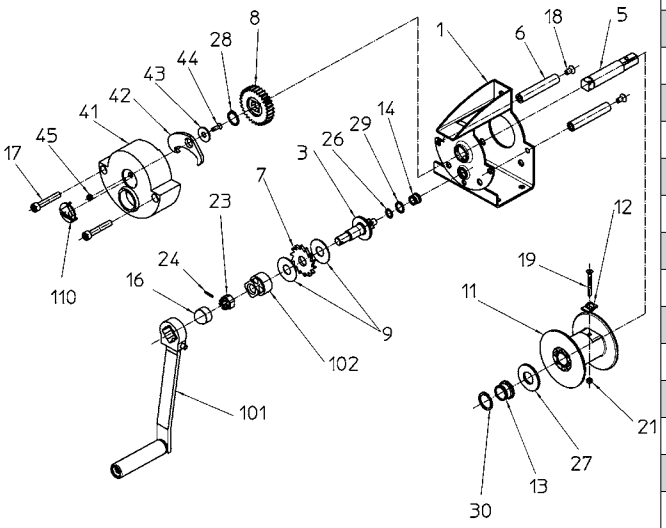
Responsible for the documentation: Construction

Signed by:

Freudenberg, 30.07.2013

on behalf of Robert Miltenberger — on behalf of Theo Müller





		WV300	WV500	KV300	KV500	WE300	WE500	KE300	KE500	WV300	WV500	KV300	KV500	WE300	WE500	KE300	KE500
		205986	**205987**	**207099**	**207118**	**207116**	**207119**	**207117**	**207120**	**230873**	**230874**	**230875**	**230878**	**230876**	**230879**	**230877**	**230880**
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101		-	-	-	-	-	-	-	-	215538	215538	215538	215538	215699	215699	215699	215699
102		-	-	-	-	-	-	-	-	134761	134761	134761	134761	136528	136528	136528	136528
3		122716	122702	122716	122702	122716	122702	122716	122702	122716	122702	122716	122702	122716	122702	122716	122702
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42		122712	122712	122712	122712	122712	122712	122712	122712	122712	122712	122712	122712	122712	122712	122712	122712
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16		100300	100300	100300	100300	100300	100300	100300	100300	100300	100300	100300	100300	100300	100300	100300	100300
17		201160	201160	201160	201160	120472	120472	120472	120472	201160	201160	201160	201160	120472	120472	120472	120472
18		101266	101266	101266	101266	100647	100647	100647	100647	101266	101266	101266	101266	100647	100647	100647	100647
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27		124157	124157	124157	124157	124157	124157	124157	124157	124157	124157	124157	124157	124157	124157	124157	124157
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